AUSTRALASIAN PLANT SOCIETY
NEWSLETTER

PENTACHONDRA

ISSUE 52 MAY 2014



Native frangipani, *Hymenosporum flavum*

AUSTRALASIAN PLANT SOCIETY

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APS NEWS

APS National Meeting and AGM 2014

The 2014 National Meeting will be held at the Royal Botanic Gardens Edinburgh (www.rbge.org.uk/). Edinburgh has plenty to delight the Australasian plant enthusiast, with many hardier species outside in the rock garden area and more tender ones in and around the glasshouses. There are also many species to see from southern Africa and South America and the Garden holds the national collection of Vireya rhododendrons of which there are a few Australian representatives. If you've a specific interest it is worth checking out the catalogue of living collections beforehand (go to the website and click on 'databases').

All members are most welcome to attend. Please don't feel that you have to be very knowledgeable about Australasian plants: you don't! The whole day, including the annual general meeting will be quite informal, with the focus on discussion and learning, both from the visit and from each other.

We will meet at 11am in the reception area in the John Hope Gateway, just inside the West Gate entrance in Arboretum Place. There are interesting exhibits, and a restaurant, where you can pass the time should you arrive early. (The Garden opens at 10 am and there is no admission charge.) Should you be unexpectedly delayed please call Judy Clark on 07724 045701 or Jeremy Spon on 07909 088198 to find out where to go.

The day will begin with the business bit, a short annual general meeting lasting until about lunchtime. With two restaurants and a cafe selling snacks there are plenty of places to eat if you don't want to bring a packed lunch. This will be followed by a tour of the Garden, including the glasshouses. The APS will pay the glasshouse entry charge for members. Closing time is 6 pm.

Should you want to bring plants to swap there will be an opportunity to do this but for bio-security reasons members' plants can't be taken into the Garden. Within the Garden itself there is an outdoor plant sales centre, profits from which are used directly to support RBGE's work.

The RBGE is situated just off the A902, one mile north of the city centre (EH3 5LR for satnav users). According to the website there is extensive parking (free at weekends and evenings) around the perimeter of the Garden and on adjacent side streets. However spaces may well fill up quickly after opening time. The nearest rail station is Edinburgh Waverley, which is 1½ miles away and is connected to the Garden by Lothian Buses service 8 which stops at the East Gate in Inverleith Row. The East Gate is also very close to the National Cycle Network Route 75, a dedicated traffic-free cycle path. A limited amount of bicycle parking is available at both the East

and West Gates but bicycles are not allowed in the gardens.

If you intend to come please advise Judy Clark in advance (editor@anzplantsoc.org.uk or telephone 01424 720369) so that you can be informed in the unlikely case of last minute changes.

APS Southern Meeting: Wakehurst Place

Wakehurst Place, the Sussex outpost of Kew gardens, is always interesting, and even better with plantaholic company. We will meet at 11am on Saturday 12 July at the main entrance, by the counters where entry tickets are sold.

The southern hemisphere garden at Wakehurst has undergone substantial enlargement in recent years and the plantings are being realigned to show their individual geographic origins of New Zealand, Tasmania, Australia, South America and South Africa. According to the website (www.kew.org/visit-wakehurst/garden-attractions-A-Z), attractions include a rare daisy bush, *Olearia lacunosa*, mature eucalypts, hebes and waratah (*Telopea truncata*) as well as nerines and red-hot pokers. There used to be a huge needle bush (*Hakea* species) in one of the beds; I hope it hasn't been removed in the re-organisation. My notebook tells me that the garden also used to contain (in 2011) *Allocasuarina littoralis*, *Correa lawrenciana* and *Pelargonium australe* and with any luck *Blandfordia punicea* (Tasmanian christmas bells) will be flowering in the monocot garden. In addition Wakehurst holds the national collection of southern beeches, *Nothofagus*, which contains fifteen of the nineteen species from the South America and the antipodes.

If you would like to attend this meeting please let me know in advance (Judy Clark, details above) so that you can be informed in the unlikely event of any changes.

Please bring plants to swap; we can do so in the car park.

Social media: New website and update on Twitter

Robbie Blackhall-Miles

Over the winter, Ben and I stepped up to the challenge of increasing the world wide web presence of the Australasian Plant Society. I have set up and taken on the management of a Twitter account called @GondwanaPlants and Ben (being a tech savvy type) has built a new website for us at www.anzplantsoc.org.uk.

The website is now up and running, and within moments of it going live we had somebody contact us via our new online contact form. There is a new gallery, more information about the society and the plants we like to grow. People are also now able to pay their first membership subscription via the website, which will hopefully attract new members. There is a member's area containing the current seed list and

an ‘all new’ plant-swaps page. The member’s area will no doubt grow as time goes on, so if you would like access contact webmaster@anzplantsoc.org.uk to get a username and password .

The website is very visually orientated and has a great new gallery. So, if you have any pictures of a Australasian plants that you would like to share, please send them to webmaster@anzplantsoc.org.uk with a few lines about what it is, where it’s from and an interesting fact about it.

As for Twitter, within a very short period of time we have gained over 200 followers and have seen lots of interesting interactions with people around the globe. Tim Entwisle (@TimEntwisle), Curator of the Royal Botanic Gardens Melbourne, is a follower along with Alistair Griffiths (@BotanyRocks), head of science at RHS Wisley. Some institutions are also following us, such as Glasgow Botanic Gardens (@GlasgowBotanic). It’s also been a great way to connect with some of our members and many followers have shown an interest in joining.

Alongside the social aspects of things, people from all over the world have asked us on Twitter to identify Australasian plants and give advice on their cultivation. Photos of interesting Aussie plants growing in the northern hemisphere have been ‘Tweeted’ to us including one of an amazing *Acacia pravissima,* growing in Wimbledon.

We have also been ‘tweeting’ pictures of Aussie and Kiwi plants. We would love it if you could send pictures for us to ‘tweet’ to socialnetwork@anzplantsoc.org.uk.

So there you have it, we have joined the world of social media and we have backed it up with a new all singing, all dancing website. We even have our own Twitter hash tag, #AusPlantSoc.

Have you paid your subscription?

If you have not yet paid your 2014 subscription you will find a polite but firm reminder to do so inserted in this newsletter. (If you have paid between the editor receiving the membership list and the publication of this newsletter then please ignore the reminder.)

The Treasurer would again like to urge members in the UK to pay by standing order as this reduces the need for reminders to be sent. If you would like to do so please contact treasurer Jeremy Spon (contact details inside back cover) to obtain a standing order form to send to your bank.

Notes On The Annual Accounts

Jeremy Spon

I hope that the accounts included with this newsletter are fairly self-explanatory, but I wanted to add a few notes just to expand on some

Keep up to date

If you want to be kept up to date with news and events by email **please make sure we have your current email address.**

details. If there is anything that any member wants to know more about, they are welcome to get in touch with me - contact details are inside the back cover of this newsletter.

Although it appears that we ran at a deficit last year, the figures are skewed by the fact that Richard Christmas, our seedlist manager, did not claim for expenses for 2011 and 2012 until last year, so the expenses shown cover three years rather than the usual one. Based on a normal year's expenditure, all our costs are still comfortably covered by subscriptions and seed payments, so there should be no need for any increase in either. Inevitably printing and postage costs are creeping up year on year, but of more concern is the slow decline in membership, and also the reduction in the number of seed orders.

As far as membership is concerned, it would obviously be better for the long-term health of the society if numbers increased rather than fell, and the committee is constantly looking at ways to achieve this. But we are not alone among small societies of all kinds in seeing membership fall, and good publicity, while essential, is always hard work. Members can help by recommending us to their friends. If you think the society is good value, please tell anyone you think might be interested, (and if you think the society is not worth recommending, please tell the committee!).

As far as seed orders are concerned, reasons for the decline are hard to guess. There is already quite an element of cross-subsidy from subscriptions as orders do not cover the annual cost of acquiring seeds, many of which have to be bought from Australian seed companies. While this is acceptable up to a point, if orders continue to decline there will come a point when the seedlist is no longer viable. It is hard to imagine that cost is a factor; at £4 for 20 packets of seed, or 20p per packet, I am quite sure our seeds represent outstanding value for money. As many items in the list cannot be obtained by any other means, unless you are prepared to buy direct from Australia, it must surely be worth trying some seeds, even if you do not succeed with all that you request. It is definitely a case of 'use it or lose it'!

Contribute to Pentachondra

There wouldn't be a newsletter without members' contributions, so many thanks to everyone who contributed to this issue.

Items for Pentachondra are welcomed from all members, from the most longstanding to those who've just joined. Any article,

short or long, that has at least a passing connection with Australasian plants and their allies will be much appreciated. Maybe you can recommend a book, or a garden or nursery that you enjoyed visiting. Or you could follow the example of those who have contributed to this issue and write about your own garden, or a plant that you find particularly interesting. We all learn from hearing about other members' successes and failures and every member can contribute to knowledge of Australasian plants and their cultivation.

The deadline for the next issue is **15th October**. Contributions should be sent direct to the editor, either electronically or as typed hard copy. If possible please submit photos and drawings electronically. Please don't compress photos before sending – my newly upgraded computer doesn't mind large files – but please do send illustrations in separate files from your article. Photos on their own are also very welcome but if you send a photo as a stand-alone item please supply a caption. Finally, don't hesitate to contact me if you have any questions about contributing.

Don't forget your seed order

The 2014 seed list is enclosed with this newsletter. Seed manager Richard Christmas would be grateful if seeds could be ordered as soon as possible and **no later than the end of June.** The seed on the seed list comes from various sources, with most purchased but some supplied by APS members who have saved seed from plants grown from APS seed in the first place, or from seed of other known origin. Seed from members is welcome as long as it is named and details concerning its origin and when and where it was collected are included.

New members

The APS would like to extend a warm welcome to new members Tamsin Fraser Gordon Gubbay, and Mrs Jay Haddow .

TWO PLANT PORTRAITS

Jeremy Spon

Pittosporum anomalum

The name says it all - it is unlikely that anyone (apart from a qualified botanist) seeing it for the first time would place this curious plant in the genus *Pittosporum*. In fact, the botanists who originally described it[1] commented:"*We have had considerable difficulty in assigning this plant to a genus*", and considered placing it in *Bursaria* instead. However, close inspection of the flowers does show the familiar shape of *Pittosporum* (photo page 9) and it has remained in that genus ever since.

It is a small to medium sized shrub, one of the many of divaricating habit in New Zealand, with small shiny dark green leaves, which in juvenile plants are toothed, but

become entire as the plant matures. Juvenile plants are also more upright, but eventually develop a densely interlaced branch structure. Apparently in the wild plants in semi-shade make a mound up to 1m high and 2m across, but in full sun they are pressed almost flat to the ground. I haven't seen any such plants in cultivation: my plant, acquired from the World Garden at Lullingstone (thanks Tom for making this available in your nursery) is still in a pot, and is still relatively upright.

I have grown Pittosporum anomalum in a pot so far due to doubts about its hardiness. It appears to have been introduced into cultivation in this country by the late Graham Hutchins of County Park Nursery[2]. His catalogues gave it a hardiness rating of 5, which was his most hardy rating, suggesting the plant should survive -15°C. The Alpine Garden Society Encyclopedia[3] also describes it as 'hardy'. However, although first discovered on Arthur's Pass on South Island, it has since been recorded from quite a few locations on both North and South Islands, some at quite low altitudes[4], so hardiness may be affected by provenance, and I am not sure where Graham Hutchins collected his original plants and/or seeds. I will certainly be trying it outside, perhaps when I have propagated it. (I have been unable to find any information on doing this, apart from the fact that it could be grown from seed if you can obtain any - if anyone has any information on taking cuttings, I would be interested to hear it.)

Perhaps the most distinctive feature of this plant, apart from its habit, are the flowers. Appearing in spring, they are tiny and cream-coloured, but have a strong and distinctive scent, which is difficult to describe, but reminds me of the richness of *Gardenia* or *Stephanotis*. Not to every-one's taste, I must say, but overall this is a plant definitely worth growing.

References:

1.'The Small-leaved Species of the Genus *Pittosporum.'* Robert Laing and H. W. Gourlay, *Trans. Roy. Soc. New Zealand, Biol. Sci. 65: 54 1935.*

2. e.g. County Park Nursery Plant List 2010

3. encyclopaedia.alpinegardensociety.net/plants/Pittosporum/anomalum

4. Detailed distribution data for New Zealand plants is available on the New Zealand Plant Conservation Network's website: www.nzpcn.org.nz

Odixia angusta

I think gardeners are divided into two camps - those who will not buy any plant they do not recognize, and those who are particularly attracted to anything new. I definitely fall into the second camp, a plant I have never heard of being almost irresistible!

In 2010 I went with a group of fellow gardeners to a plant fair and garden show at Beervelde in Belgium. (If any member has the chance to attend this event, by the way, I strongly recommend it. Quite apart from the huge variety

of plants to buy, many rarely if ever seen for sale in the UK, it is a far more enjoyable and relaxed event than Chelsea or Hampton Court, less commercial, more informal. It is held twice a year, in May and October, and is possible to reach on a day trip from the south-east of England, which is how I went, admittedly in a coach, but you could drive yourself.)

Among the many small specialist nurseries at the show (mostly from Holland and Belgium) was one, Plantcentrum Hulsdonk, selling an extraordinary range of trees and shrubs, many in 9cm pots at ridiculously low prices. They had quite a few species from Australia and New Zealand, and one in particular caught my eye, *Odixia angusta*. Never having heard of the genus *Odixia*, I had to buy it! The label was quite informative, provided you spoke Dutch, which I don't, but I did manage to work out that it came from Tasmania, and that it might be hardy down to -10°C.

Back in the UK, and with the help of the internet, I managed to find out that *Odixia* is a relatively recent genus, created to contain two Tasmanian species which were formerly in the genus *Ixodia*. I wasn't much the wiser, although it was clear that the botanist responsible had been stuck for a new genus name and simply used an anagram of *Ixodia*[1]. However, a further synonym, *Helichrysum angustum*, does give more of a clue to the character of the plant, or at least its flowers, which do resemble those of some of the better-known shrubby members of the *Asteraceae* which occur in Australia, such as *Cassinia* and *Ozothamnus*. One of the common names in Australia reinforces this, being roundhead everlasting bush.

Odixia angusta has small, shiny green, aromatic leaves and clusters of small white daisy flowers at the ends of the stems in spring (for a photograph see reference 2). The new growth has a distinct yellowish tinge. It is, so far, proving to be an unspectacular, rather straggly, but easy to grow small shrub, which has survived, planted outdoors, both the cold winter of 2012 - 2013 and the very wet one we have just experienced. Coming as it does from the driest parts of Tasmania, it also seems to be fairly drought tolerant.

In the wild it is "*common in coastal heaths in the central east coast*"[2] of Tasmania, to which island it is endemic, and hence on a global scale it is a rare plant. I have found no reference to it in any gardening book published in the UK, nor is it listed in the Plantfinder, so it is probably rare in cultivation here. All in all, an exciting find for a rare plant enthusiast like me!

References:

1. The Generic Limits of Ixodia, A. E. Orchard, Brunonia 4(2) 1981
2. www.utas.edu.au/dicotkey/dicotkey/AST/gnaph/sOdixia_angusta.htm. This site includes a photograph.

Editor's note:

Apparently this species is also rare in cultivation in Australia.

WHY ARE NOTHOFAGUS SPECIES SO RARE IN BRITAIN?

© John Purse

The southern beech (*Nothofagus*) species that are native to New Zealand, temperate Australia, Chile and Argentina have been grown in Britain for at least a century, and in some cases for longer. *N. betuloides* was first introduced from Chile in 1840s[1]. The various species generally thrive in Britain. They are particularly happy in the milder and wetter western parts of Britain, and also in Ireland. The growth rates of some of the evergreen species in these locations are very high, but most are also happy in drier conditions on the eastern side of Britain. Wakehurst Place, Sussex holds the National Collection of *Nothofagus*, and they are also represented at RBG Kew, and RBGS Edinburgh and Benmore. Other collections are at Plas Newydd, Anglesey and the John F Kennedy arboretum in County Wexford (photo page 10).

The occurrence of many of the evergreen species at ages of over 30 years suggests that they are quite well adapted to cold. This is not a new observation; Elwes and Henry noted in 1908[1] that Mountain Beech (*N. cliffortioides,* now *N. solandri* var. *cliffortioides*) is evergreen in its native habitats in New Zealand, but that it can be deciduous in Britain. I saw a similar effect with young *N. dombeyi* during the severe winter of 2009-10; the trees lost almost all their leaves, but buds on the bare stems and twigs re-sprouted the following spring.

Many of the species are attractive, and deserve to be planted more widely, particularly in these times of a plethora of pest and diseases affecting so many of our familiar native and introduced tree species. The evergreen ones even appear to be unaffected by *Phytophthora pseudosyringae*[2]. This root pathogen has recently affected British stands of two of the deciduous *Nothofagus* species native to Chile (*N. obliqua* and *N. alpina*) that have been trialled to a limited extend in forestry here.

So why don't we encounter *Nothofagus* species more frequently, and never see them for sale even in specialist garden centres? The answer of course is that the seed of these species is rarely available. Examining why this is so highlights some interesting insights into the biology of these species, and my purpose in this article is to discuss these.

From the horticultural standpoint, the first point to make is that like the beeches of the northern hemisphere, the southern beeches have mast years. These typically occur every seven years in Chile and New Zealand, and in the intervening years the flowering and seed production is negligible. In Chile, the developing seeds are host to larvae that devour the interior, so that the seeds produced are largely non-viable. The seeds

Pittosporum anomalum **flowers**





Acradenia frankliniae



A group of *Nothofagus betuloides* (Coigüe de Magellanes, from Chile), from a seed accession of 1988, photographed in the John F Kennedy arboretum, Co. Wexford in March 2008



Seedlings of *Nothofagus fusca* (Red Beech, from New Zealand) with pale green leaves under a small stand of the species in the John F Kennedy arboretum, Co. Wexford, photographed in September 2008.

are not retained on the tree, but are released as soon as they mature, so collecting quantities of the seed is not easy unless the weather is fine and dry enough for it to be collected on sheets as it falls from the trees. Seed does not retain good viability in storage for more than a couple of years. Fresh seed requires stratification in order for it to germinate. Unusually in my experience, artificial stratification in a refrigerator at 4°C consistently gives poor germination; the seeds require natural stratification outdoors over winter to give good germination. (This observation conflicts with studies by the Forestry Commission[3]. These studies also reported that gibberellic acid treatment can substitute for stratification, but in my experience this treatment leads to rather limited germination compared to natural stratification).

The foregoing explains why supplies of imported seed are small and erratic, and why they attract very little interest from nurseries who specialise in liner (young plant) production from seed. But it also raises the question of how these species propagate themselves in the wild, sufficiently successfully to produce huge forests in which they are often the dominant species. The answer to this point is contained in the foregoing description, and can often be observed in small stands of these species in Britain.

The tendency for *Nothofagus* species to have mast years is less marked in Britain, so provided there are several trees that can cross-pollinate one another, reasonable amounts of seed are produced in many years. The seed usually matures in September, and falls to the ground as soon as it is mature. Winter conditions provide the perfect environment for natural stratification, so provided the ground in the arboretum or park remains undisturbed, the seed germinates in the spring. Later in the year, the result is a carpet of seedlings (photo, opposite). The growth of these seedlings is inhibited by the canopy of the parent trees, and they simply remain as small seedlings, often only a few centimetres tall, for many years. The seedlings appear to cope well with the shade provided by the parent trees, and so are relatively free from competition from vigorous but light-demanding species. Clearly, if the parent trees die, the seedlings are released from competition and start to grow. This strategy, whereby there is no long-term seed bank on trees or in the soil, but rather a population of suppressed seedlings, is a common propagation strategy in many tropical rainforest tree species (for example, most of the Dipterocarpaceae).

In Britain, the host of seedlings doesn't seem to occur under isolated specimen trees, so I suspect that cross-pollination is essential for seed production. The seedlings face another challenge in many garden locations in Britain of course - mowers! They certainly seem most abundant in locations where the soil surface is rarely

disturbed; the Kilmun arboretum in Argyll seems particularly good in this respect, because of the steep terrain there.

The seedlings generally have small root systems and are very easy to extract and transplant, though they take a long time to re-establish in a pot. I can't see this being a commercial proposition, and I certainly wouldn't advocate it being done informally on a small scale without permission. But my experience is that landowners and garden curators are totally unaware that these seedlings exist at all, and some are happy enough for seedlings that have no obvious future and that are at risk from mowers to be removed.

I won't dwell on the characteristics of individual *Nothofagus* species, as most become far too large to be grown in even medium-sized gardens. A couple of my favourites are *N. solandri* (black beech, from New Zealand), for its delicate fronds in spring, and *N. alessandri* (ruil, an endangered deciduous species from Chile), for its spectacular colours in late autumn. Plas Newydd has a good stand of the latter, planted in 1980, but I fear that mowing culls any regenerating seedlings there.

References:

1. Elwes, HJ and Henry, A (1908). The Trees of Great Britain and Ireland. Edinburgh, Privately Printed. Vol 3 pp549-557

2. Forest Research (2011). Current tree health issues. Available at: www.forestry.gov.uk/pdf/Tree_health_issues-RICs_meeting_March_2011.pdf/ $FILE/Tree_health_issues-RICs_meeting_March_2011.pdf

3. Gordon, AG (1977) Raising Nothofagus from seed. Forestry and British Timber Vol 6 (3), pp20-21

ACRADENIA FRANKLINIAE

© Gary Dunlop

Not all members of the citrus family, the Rutaceae, bear edible fruit. One such plant is the Tasmanian endemic, *Acradenia frankliniae*. It is an evergreen shrub or small tree which normally keeps it foliage down to ground level. The clusters of white flowers enliven this discreetly attractive plant in June (**photo page XX**).

It was first discovered in 1842 by Dr Joseph Milligan, the secretary of the Royal Society of Van Diemen's land, close to the Franklin River, a tributary of the Gordon River which flows into Macquarie harbour on the west coast of Tasmania. He was accompanying the then Governor of Tasmania and his wife, Sir John and Lady Franklin on an expedition through this fairly remote terrain, in order to establish a land route across the island. Even today there seem to be few if any roads in the mountainous and forested western side of Tasmania. The remote Macquarie Harbour is not actually a conventional harbour, but the name for a large, almost enclosed, inlet half way down the western side of the island. A penal colony there was abandoned in 1831.

This newly discovered plant had already flowered, but Dr Milligan nonetheless collected some material which he sent to the Linnaean Society in London. A small plant was sent to Kew in a Wardian case in 1845 and it was only after the plant had flowered at Kew some ten years after its first discovery and seven years after live material reached Kew that the plant could be properly identified and named. The plant was formally described and named by the Mr Richard Kippist, the librarian of the Linnaean Society, in a paper read to members on June 1st 1852[1]. He differentiated it from an established genus *Zieria* and based the name of the new genus on there being glands at the tip of the ovary (Greek *acros* (at the top) and *aden* (gland)[2]). The specific name commemorates Lady Franklin.

Surprisingly, it was not described and illustrated in the Botanical Magazine[3] until 1927, when it was described as suitable for the cool-house, despite the material illustrated coming from the Marquis of Headfort who grew it in the open in his garden at Kells in County Meath. It was suggested that "*many a sheltered place on the west or south-west coast of England or Scotland would suit it equally well*". *A. frankliniae* was clearly not generally considered very hardy, and Sir John Ross of Bladensburg was perhaps one of the first garden owners to try growing it in the open, in the mild and sheltered garden at Rostrevor House, where he established a remarkable plant collection. In an article in 1920 describing plants grown in his wild garden, Lady Phylis Moore, wife of the curator of Glasnevin Botanical garden, and a notable horticulturalist in her own right, mentions "*A. frankliniae, a native of Tasmania, seldom seen outside a greenhouse, here flourishes out of doors*"[4]. Sir John no doubt inspired other notable gardeners to try growing it outside, and it has proved to be quite hardy, though it probably requires relatively cool moist or humid climate to thrive. Winifred Curtis, in the brief text accompanying a botanical illustration of the plant, quoted a diary entry of David Burns, who had also been on the 1842 expedition: "*the locality of Macquarie Harbour is somewhat of the moistest, rain being said to fall three days in four*"[5].

Acradenia frankliniae, known colloquially in Tasmania as whitey wood, has a more extensive range on the western side of Tasmania than noted by most authors, extending both to the north and south of Macquarie harbour, albeit in discrete isolated locations. These are shown on a small map in a privately published book on native Tasmanian trees[6], accompanied by line drawings and a very concise text which is well worth repeating here. "*This small endemic tree is confined to riverine rainforest in the west of the state where it usually occurs in the understorey. It may be confused with the trifoliate shrub species Zieria arborescens, but can be easily distinguished by its thick, almost succulent leaves."*

Whilst the text accompanying tab. 9167 in the Botanical Magazine[3] refers to *A. frankliniae* growing to 3m high, Winifred Curtis[5] describes the species thus: "*The shrubs and trees 3 to 10 m high, have many slender branches which spread and droop, so that almost from ground level, there is a canopy of blossom.*" This would seem to imply that the species occurs in two forms, a shrub up to 3m or a tree up to 10m tall. The majority of plants in cultivation in the British Isles would seem to be the shrub form and could well be mostly descended from a single early introduction, as is the case of the Chilean climber, *Berberidopsis corallina*, and no doubt many other plants.

It is easily propagated from cuttings, though apparently no so easy from seed[7]. This reference also states, under the heading Cultivation, that the plant requires moist, free draining soil in part shade, and confirms the height to be between 3m and 10m and the width 2m to 4m, though the width may refer to the tree forms as all mature plants that I have seen in cultivation are barely 3m tall and less than 2m in width. However, there may have been a more recent introduction of the tree form, About five years ago I bought another plant out of curiosity; it has grown upwards quickly but is sparsely branched.

Acradenia frankliniae is reasonably hardy and my plants have experienced at least –14°C and on separate occasions up to 150mm of damp snow, or dry snow lying for 6 weeks in the winter of 2010-11. However, it is unlikely to do well in the hot and dry east or south east of England.

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1. Kippist, R. 1852: On Acradenia a new genus of Diosmeae. Trans. Linn Soc. Vol.21 pp.207-10.

2. Wapastra W, A & H 2010: Tasmanian Plant names unravelled. P.260 Fullers Bookshop Launceston.

3. Bot. Mag. 1927(9): Acradenia frankliniae. Tab 9187.

4. Moore, Lady W.P. Moore 1920: A visit to Rostrevor House Garden in May. Irish Gardening Vol.15 No.172 June pp.81-3

5. Curtis, W. & Stones, M. illust. 1967 : The endemic flora of Tasmania tab no.167 The Ariel Press

6. Kirkpatrick,J.B. & Backhouse, S.1985: Native trees of Tasmania p.54 Privately published by Sue Backhouse, Hobart.

7. Howells, C. ed. 2012: Tasmania's Natural Flora revised 2nd edition. p329.(1st edition authors Whiting, J.; Roberts, J.; Reeves.R., & Tayler, F V.)

p329.(1st edition authors Whiting, J.; Roberts, J.; Reeves.R., & Tayler, F V.)

SOUTHERN HEMISPHERE PLANTS ON JERUSALEM LIMESTONE

Robbie Blackhall-Miles

On a recent botanising trip to Israel we had the opportunity to visit the Jerusalem Botanical Gardens . The

main purpose of our visit was to see the many endangered Israeli plant species that grow there.

There was, however, an added reason for visiting. The gardens are laid out by geographical area and the garden features areas of the world with a similar climate, a Mediterranean climate. There is California, southern Europe, The Canary Islands, Israeli natives, North Africa and South Africa. One of the largest areas of the gardens is Australia.

The average temperature in the gardens is 24°C during the summer and the minimum temperature the garden has seen in the winter is -6.4°C. Jerusalem receives about 550mm of rain per year which falls between October and May, a similar amount to London. The rock that the garden is built on is pure white limestone, yes you read that right, they are growing Australian and South African plants on limestone.

Interestingly, we arrived just a couple of months after Jerusalem had received a foot of snow, which brought the world's oldest city to a standstill. Many plants were looking a bit bedraggled to say the least. Many of their 'not so hardy' eucalypts had shed limbs and the Proteaceae weren't looking too hot either. It was clearly obvious, due to their size, that the plants had grown and thrived there prior to the snow.

Eucalypts are a common feature of the Israeli landscape. They do very well in the country, making the most of the water that falls in the winter and being more than able to cope with the hot summers. There were many of the red flowering varieties on show, so many species in fact that I won't list them here.

Some soil improvement had been done when the garden had been laid out in the early 1990s but certainly not enough to counter the effect of the lime and other plants growing in the Australian area had obviously been chosen for their ability to deal with the high pH. Many members of the Proteaceae, including banksias and grevilleas, had made large shrubs and even trees. Plants of *Banksia blechnifolia* and *B. ashbyi* were on show in a few spots, and had obviously thrived, but the most notable ones were *B. marginata, B. serrata* and *B.integrifolia*. These stood out for having not only done so well on the limestone but also having not batted an eye lid at the snow. Having seen these banksias doing so well we have completely changed our opinion of what these plants may endure.

Grevillea 'Robyn Gordon' (photo page 19 was growing in numerous places in the garden and flowering well. It had hardly been touched by the spate of cold weather. Other Australians doing very well were *G. thelemanniana* (in flower), *Dianella tasmanica* and *D. nigra*, *Brachychiton rupestris* (also unaffected by the cold snap, **see** photo page 19), *Pittosporum phylliraeoides*, numerous species of *Xanthorrhoea* (grass trees) and many acacias.

Surprising, to us, was to see some very mature plants of the palm *Livistona australis* thriving in the garden. They seemed untouched by the recent Israeli weather which has led me to reconsider them as a hardy species in the UK.. I wonder if the critical factor for them is not winter cold but more summer heat?

For those interested, South Africa had fared even better with the stars of its show being the aloes, some of which had reached considerable proportions and were flowering well just two months after the extreme (for Israel) weather. All in all we came away with our eyes thoroughly opened to the possibilities of a southern hemisphere garden on limestone and a desire to change some of the planting in our own garden.

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PLANT HERITAGE

Gary Firth

Plant Heritage (NCCPG) is the foremost charity in the UK involved in the conservation of cultivated garden plants. This is achieved in a number of ways but the most important is still no doubt its championing of National Plant Collections. There are currently in the region of 640 National Collections spread across the UK held by botanic gardens, estates, council parks departments and individual collectors

More recently it has developed a Threatened Plants Project, which so far has identified thousands of plants in over 360 genera which are in danger of being lost forever. Of these, 857 named cultivars have been located in National Collections, Botanic Gardens, National Trust Gardens and elsewhere and are now in active conservation. A Plant Guardian scheme has been launched which enables individual Plant Heritage members lacking the facilities to hold a full National Collection to hold and conserve one or more threatened plants. This is supported further through a Plant Exchange scheme which takes place at the annual AGM and national meeting.

Its conservation activity also extents to lobbying of politicians and others with a stake in plant conservation. Most recently it has taken a major lead in highlighting the dangers of proposed new EU regulations on Plant Reproductive Materials which could have had a devastating impact on the number of cultivated plants currently available from nurseries in the UK.

My wife Maria and I are collection coordinators for the 19 National Collections currently held in Sussex by 14 different institutions and individuals. These include at least four genera of southern hemisphere plants including the Douglas Chalk Hebe Collection held at Plumpton College and the New Zealand genus, *Lophomyrtus* which we hold in Haywards Heath. Several other southern hemisphere collections are in development.

Further information on Plant heritage and its conservation activities can be found at www. plantheritage.com.

AUSTRALIA in SHEFFIELD BOTANICAL GARDENS

Peter Kohn

The original gardens on the site of Sheffield Botanical Gardens were designed by Robert Marnock and opened to subscribers in 1836. At the end of the nineteenth century the gardens were taken over by the Sheffield Town Trust and since 1951 have been leased to Sheffield City Council. A complete restoration, which was finished in 2005, saw much of the gardens re-landscaped, but the new Mediterranean Gardens were rather unsuccessful. So in the winter of 2012-13 the beds were stripped out and new paths laid and a completely new planting was undertaken in May last year. There are beds for each of the five areas of the world which have Mediterranean climates including one for Australian species.

The weather since replanting has been ideal: enough rain immediately after planting, a decent summer, and a very mild winter. So mild that even long shots like the king proteas (*Protea cyanaroides*) in the neighbouring South African bed have come through safely and all the Australian plants look to be in rude health. During the winter all the correas have flowered well and are still in flower in late March. Several plants of each of *Correa alba* (photo page 20), *C. backhousiana*, *C. decumbens*, C. 'Mannii' and *C.* 'Marian's Marvel' have been planted.

So far most of the planting in Australia is of trees and shrubs including two acacias (*Acacia longifolia* and *A. retinoides*), two hakeas, *Hakea nodosa* and *H. teretifolia*, both of which flowered during the winter, and *Callistemon rigidus*. Space has been left for additional plants although if everything continues to thrive the existing plants are going to fill most of the space. There are also plants of *Banksia marginata* (photo page 20) raised from wild-collected Tasmanian seed so technically these are interlopers (not being Mediterranean).

Elsewhere in the garden there are thriving plants of *Grevillea rosmarinifolia*, a waratah (seed-raised from a plant of *Telopia* 'Burgundy' which flourished in north west Scotland) and *Astelia chathamica* as well as a young *Acacia baileyana* which so far has survived a couple of winters and is beginning to build up. There is also a whole section of Australian plants in the wonderfully restored pavilions so the Sheffield gardens have a surprising amount to offer lovers of Australasian plants.

Editor's note:

Callistemon rigidus R.Br is no longer recognised as a separate species in Australia, but as synonomous with *Callistemon linearis* (Schrad. & J.C.Wendl.) Colvill ex Sweet. If Lynn Craven's views prevail that name will be changed in future to *Melaleuca linearis* var. *linearis*.

CUTTINGS, FOOTHILLS STYLE

Judy Clark

When I was in Melbourne earlier this year I was lucky enough to be invited by Nicky Zanen (many APS members will remember her from her time as our secretary) to attend a propagation workshop organised by the Foothills Group of the Australian Plants Society, Victoria. The idea was for members to bring plant material to make new plants for themselves and others, including a local primary school.

So it was that a hot day at the beginning of February found me sitting at a trestle table in the shade of a garage at the home of Bev Fox with, at a guess, around twenty other native plant devotees. The cuttings medium, a 3:1 perlite coir mix (using coir blocks) had been prepared earlier, and containers of it were distributed along the table, along with pots, labels and purple Clonex hormone rooting gel. (Clonex contains indolybutyric acid. Strike, which I have been advised to use, contains 1-naphthylacetic acid. I would be interested to hear more about the relative merits of these two products.)

For those new to propagation using cuttings, clear and concise instructions were given about what to do: score the base of the cutting; remove excess leaves carefully, don't strip them; and cut larger leaves in half to reduce water loss. The pots used were small, from memory maybe 5cm, and we packed cuttings close together with the leaves touching, 3 or 4 to a pot. The argument is that this helps to maintain a humid atmosphere and the cuttings provide support for one another[1].

Material from lots of different plants was available. Nicky was keen to have more plants of *Chrysocephalum apiculatum*[2] and *Veronica arenaria*[3] (photos page 21) for her garden, so I did quite a few of those, plus some correas, where I was advised to use 'springy growth'. Light watering and that all important label were all that was needed to complete the task.

When we had finished we sat down together for drinks and snacks, a wonderfully convivial atmosphere to end the afternoon. Afterwards I was privileged to be able to look round Bev's garden. I am always being told that February is not the best time to see gardens in Melbourne, especially when it has been hot. It is true that earlier in the summer I would most probably have seen more species in flower, but for me to see a native plants garden at any time is a real pleasure and in any case I'm interested in the design as well as the plants. Highlights were a big *Banksia citriodora* (lemon myrtle) with its pungent lemon scented leaves (there is a picture of this plant on our new website, for details see page 2), flowering *Grevillea rhyolitica*, *G. bipinnatifida* and *V. arenaria,* and *C. apiculatum* carpeting the nature strip[2] in front of the house.





Jerusalem Botanical Gardens

above
***Grevillea* 'Robyn Gordon'**

right
Bottletrees (*Brachychiton* species)

New planting at Sheffield Botanical Garden



Albany bottlebrush (*Callistemon speciosus*) and silver banksia (*Banksia marginata*)



Correa alba



Ready to go ...
(the one with the blue flower is *Veronica arenaria*)



Potted up!



Trays of cuttings doing well out of doors, with bottom heat



Red-flowering gum, *Corymbia ficifolia*



Dwarf apple gum, *Angophora hispida*, Bob O'Neill's garden, Melbourne, February 2014

I am pleased to be able to report that my cuttings made it. About 5 weeks later Nicky contacted me to say that they were ready to be potted up (**photos page XX**). Being close together has clearly not done them any harm and hopefully Nicky will get her carpet of daisies. One *Veronica* cutting had already flowered, and I am pleased Nicky did not cut the flowers off because otherwise I would not have had a photo of it, as I had tried and failed to take a decent photograph this beautiful plant in Bev's garden.

At the workshop I met up with again with Bob O'Neill. (Bob and his wife Dot developed and ran the internationally known Katandra Gardens for many years and Bob was Australian Gardener of the Year in 2005.) He invited me to come and see the progress he had made with his new garden at Narre Warren, and while there I took a picture of his cuttings (page 21). The trays sit on a table with heating cables (Bob uses bottom heat, even in summer), and the table is situated out of doors, in a shady spot on the verandah, .

Notes

1. This is what the late Peter Thompson advises in his excellent book **Creative Propagation** (second edition, 2005, Timber Press).

2. Known as yellow buttons or common everlasting, *Chrysocephalum apiculatum* is the accepted name in Australia but it is also known as *Helichrysum apiculatum*. It is a very common perennial herb, occurring in all states and territories.

3. This low growing shrub with glorious blue flowers is found in NSW and Queensland. *Veronica arenaria* is now the accepted name in Australia but other names are *Derwentia arenaria* and *Parahebe arenaria*.

4. The nature strip is akin to what is called a verge in England, except that the home owner is responsible for its care.

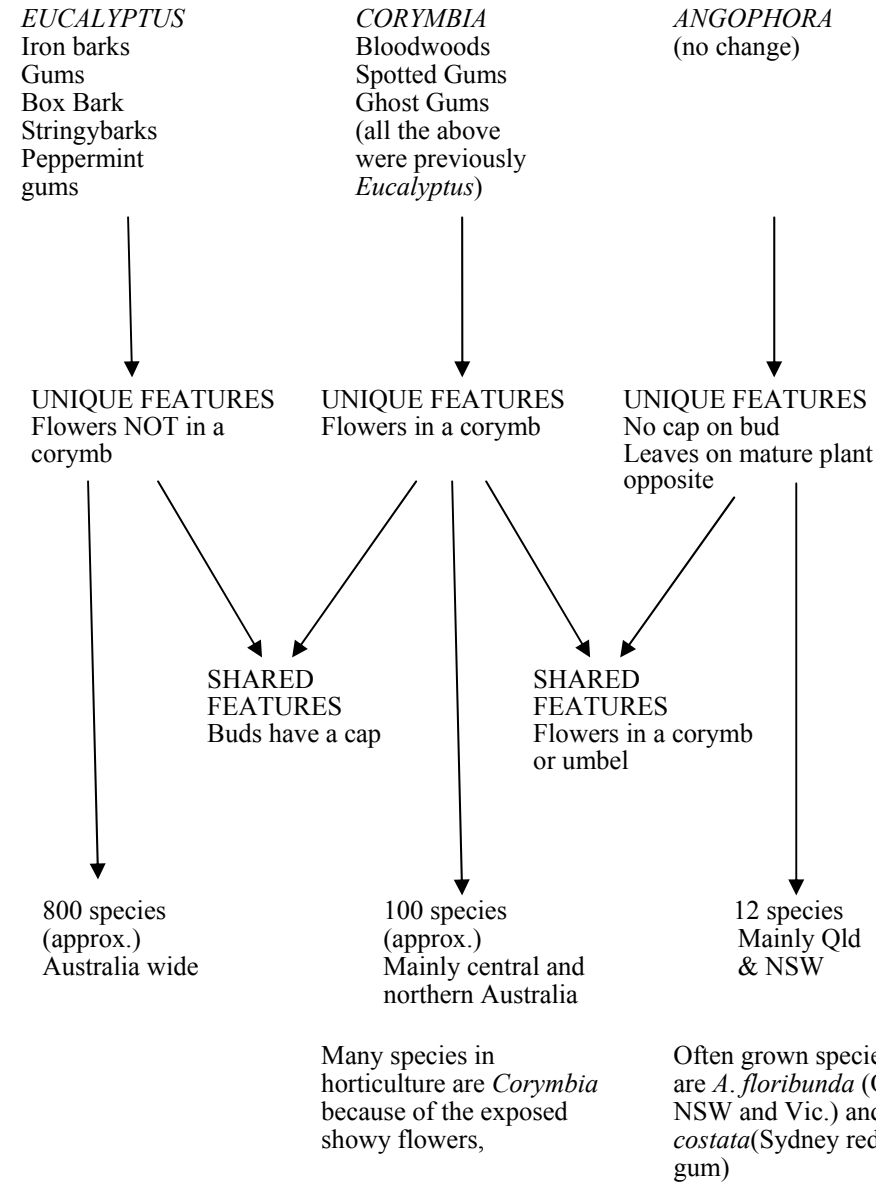
CORYMBIA, ANGOPHORA and EUCALYPTUS

Nicky Zanen

Recently Elspeth Jacobs, a keen member of the ANPSA* Eucalyptus Study Group, clarified to members of the APS Maroondah group what the differences are between *Corymbia*, *Angophora* and *Eucalyptus*, as summarised in her diagram on page 24. I hope it will interest APS UK members as much as it did me.

There are over 100 species of *Corymbia* which mostly come from northern Australia. They normally have showy flowers and are characterised by having them arranged in corymbs. As Elspeth explained, a corymb is an inflorescence (flower spike) with branches starting at different points but ending up at approximately the same height, a bit like a cauliflower (see figure on page 25). The ones we know best in Melbourne are the lemon scented gum (*C. citriodora),* the spotted gum (*C. maculata)* and the red-flowering gum (*C. ficifolia*, page 22, note the cap on the buds). *Corymbia* were split from *eucalyptus* in 1995 and until.

SIMPLIFIED EXPLANATION OF THE GENUS *CORYMBIA*



Elspeth Jacobs

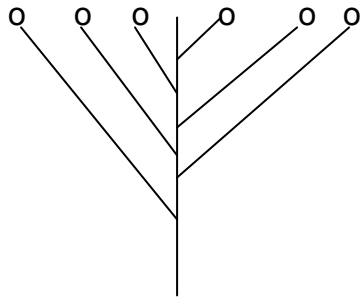
recently not everyone accepted this, but now the split is well accepted

There are about 12 species of *Angophora*. They are notable for having opposite leaves (on mature trees). They also don't have a cap on their bud. The photo (**page XX**) shows dwarf apple gum (*Angophora hispida*) in flower.

Eucalypt means 'well covered', a reference to the cap on the bud (operculum). *Eucalyptus* are also differentiated from *Angophora* in having alternate leaves on mature trees though you find opposite leaves on juvenile trees.

Unfortunately neither *Corymbia* nor *Angophora* species are hardy in the UK, and nor are many of the showier *Eucalyptus* species. .

*Note: ANPSA stands for Australian Native Plants Society (Australia). Rather confusingly APS in Victoria stands for Australian Plants Society while in the UK it is of course Australasian Plants Society.



A schematic diagram of a corymb. Each stalk ends in a flower.

GARDEN REPORTS

News From East Kent

Jeremy Spon

I was going to call this article a report on last winter, but we didn't really have one! So the news is as much about the weather as the plants. In the six months October to March, the lowest temperature we recorded was -2.5º C; there were only 10 nights with any frost at all; and no days when the temperature failed to reach 5º C. On the other hand, it was incredibly wet. Officially declared the wettest winter since records began, we recorded 684 mm (almost 27 inches) over the same six months, nearly all of it between October and the end of February. This is more than we usually get in a whole year.

The result was no damage to any Australasian plants growing in the open ground, apart from that done by the wind. In a very fierce gale just before Christmas, a large *Eucalyptus urnigera* (urn gum) blew over, and several other shrubs were quite badly rocked at the root. None so far appears too badly affected, and the eucalyptus, having been cut back to a stump, is resprouting vigorously (and I have a good supply of logs for the woodburner.) Now, with the continuing warm spring, many things are bursting into new growth, and one result of this is that it looks as if some of the callistemons will flower much earlier than they did last year.

Grevillea 'Olympic Flame' has, as usual, flowered on and off all through the winter, and is now looking quite spectacular. (This hybrid is certainly hardy to -10º C, and probably lower, and will continue flowering even when there is snow on the ground.) *Correa* 'Marian's Marvel' likewise flowered for a long period; I am hopeful that this, planted in a sheltered spot on a west-facing wall of the house, will survive much colder winters outside as well.

One obvious conclusion from all this is that wet is not especially damaging except when the weather is also cold (something which is also obvious from gardens on the western fringes of Britain, with their relatively high average rainfall but mild winters.) As the 'winter' was so unusually mild, it did not tell me anything useful about the long term survival prospects of some of the plants which might be considered risky outdoors, but I am not complaining about this! One lesson that was reinforced is the danger of plants drying out in greenhouses when the temperature shoots up in bright spring sunshine. Due to carelessness on my part, I actually lost more plants under cover than I did outside, and two acacias which normally put on a good show of flower in early spring, *Acacia paradoxa* and *A. longifolia*, dropped their flowers very quickly. As I write I am beginning to move most plants to their summer positions outside; I know this is tempting fate, as we could still get some frosts in May, but I am hoping these will be slight and short-lived, and I need the room for the tomatoes!

The joys of moving a plant collection

Jeff Layman

In September 2012 we moved from West Sussex to South Hampshire. Apart from the usual trials involved in moving, I had a large number of plants in pots which I wanted to move with us. I made sure the plants were well watered before the move, as they had to stay overnight at the removal company's depot. Some of them were in 50cm earthenware pots, so they were pretty heavy. In fact, I was told later that the removal lorry was so heavy it could barely get up Bury Hill on the A29!

Apart from damage to the growing point of a 150cm monkey puzzle tree, *Araucaria araucana* (finally showing a replacement after more than a year), the rest of the plants seemed fine. I wanted a 14 x 8ft greenhouse for the Australian (and other frost-sensitive) plants, but that would take some time, so as a temporary measure I bought one of those 4 x 6 ft polythene greenhouses. I ordered the main greenhouse, and arranged for a company to dig out the foundations and a trench for the power supply, and to replace the top 15cm of soil in the greenhouse with a 3:1 mix of washed sand and JI ericaceous compost. Unfortunately, work could not start on the foundations until a 6m conifer hedge a couple of metres to the west of the

proposed greenhouse position had been trimmed back to 4m.

With all the tender plants crammed into the 4x6, and cold weather imminent, I hoped for an early start on the foundations. Then it started raining. No doubt many of you remember how wet autumn 2012 was. The builders arrived in mid-November to dig out the foundations. It had been raining for days when they arrived, and it continued to pour down. They erected a gazebo over the site to keep the rain off. But, being at the bottom of a slight slope, they soon found they were actually digging a garden pond! After several hours they admitted defeat, and told me they would be back when it had stopped raining. I couldn't argue with that, but it meant that the slot for the greenhouse suppliers to erect it would be missed for another week. A few days later they were back to complete the work, mainly without hitch, although the roots from the conifer hedge caused some difficulties. Later that week the greenhouse was erected.

As it was now late November I immediately moved the plants from the temporary greenhouse to the new glass one. A 1kW fan heater (controlled by a separate thermostat) was put in, and connected via a long extension lead (Health and Safety were not informed), which was very timely as there was a heavy frost that night, the first real one of the year. The plants were fine, and in early December the electrician wired up the greenhouse with a proper connection. Mind you, my wife and I had to fill in the trench with gravel to cover the armoured cable, and then replace the two dozen paving stones to cover the trench! The fan heater was connected to the new circuit, and a small oscillating fan also put in the greenhouse. This fan operates continuously. As I have mentioned before, I believe that air circulation is more important than a high temperature over winter. If fungal spores cannot settle easily, the chances of botrytis and other fungal damage are considerably lessened.

Over the next few weeks I started removing some of the plants from their pots and planting them in the greenhouse soil. Many were of Western Australian origin, so were quite happy in the rather poor sandy soil. Fortunately, they didn't seem to mind the very damp soil resulting from the rainy conditions, especially as the greenhouse was near the bottom of the slope. Over the winter there were one or two losses, but surprisingly few.

Once the warmer weather appeared in June, the plants started growing well, and a *Banksia occidentalis* and *Kennedia nigricans* flowered well. In fact, the latter became extremely rampant and had to be cut back before it took over the whole greenhouse!

After two months without rain in the hot summer, I found a crack in the foundations by the greenhouse door! The builders came to check it, but there was little that could be done, short of dismantling

everything and starting again. To be fair, the conditions had been extreme, and the foundations had, if anything, been overengineered. They were more than sufficient to support a double course of bricks and the greenhouse. I cut through more conifer roots in case they had been part of the cause, and sealed the crack. Since it started raining again there has been no further problem.

But the weather had to have the last word, of course. We had some of the worst winds of the winter on February 14th, St Valentine's Day. On Saturday morning, I could see that one of the 1600 x 600 mm glass panes was missing from the greenhouse roof. I went out and found it on the lawn over 6m away! Fortunately, it missed the paving stones, and being made of toughened glass, did not break when it hit the ground. I replaced it later in the day when the wind had dropped sufficiently.

In autumn 2012, and spring 2013, I was able to get some plants in the ground, including two callistemons, grevilleas, and pittosporums. I was a bit concerned that some of the larger holes would act as a sump, but that does not seem to have occurred. The worst problem has been the wind: a 3m high, 25 years old, *Carmichaelia stevensonii* has been pushed around so much, despite being staked, that the main stem has a 10mm gap all around it. I find it quite strange that a plant which has no leaves and is fairly open should have suffered so much from the wind.

Could you help publicise the APS?

The editor has a stock of full colour A5 publicity leaflets: all you have to do is ask for some.

Unfortunately, I still have dozens of plants to put in. But until the ground dries out sufficiently they'll have to stay in their pots.

Chatham Island forget-me-not in Hampshire

Jeff Layman

This past winter has been a trial, but the warm and wet conditions have resulted in success with one plant I've always had problems with before, the Chatham Island forget-me-not, *Myosotidium hortensia*. I don't know how many times I've tried to grow it, but it has always given up after barely a year, at best two. They've never grown more leaves, and most certainly never flowered.

But this winter I left one outside with several other plants (such as *Lapageria*) in a deep planter filled with moist, free-draining ericaceous soil, and placed by a north-facing wall. It is 600 mm off the ground, and seems to be out of reach of slugs and snails. The leaves looked pretty good all winter, with barely a mark or hole on them. By mid-March this year four flowering heads had appeared.

It really was well worth waiting for (**photo page XX**). It now (mid-April) has six heads, and it is

possible that there is another one forming underneath! What would happen to it in a frosty winter doesn't bear thinking about, although if something like that threatened I think several layers of fleece or bubble polythene would be required to protect it.

Notes from north Wales, winter 2013-14

Robbie Blackhall-Miles

Well, we have just spent the past 4 months in a state of anticipation. We have been anticipating the 'Snow'donian snow that hasn't yet arrived.

We tucked up the majority of our Proteaceae collection for the winter in our greenhouse yet as it turns out it may well have fared equally outside. The garden itself saw a brief low of -1°C early in the season and having installed all of the 'gubbins' to heat our greenhouse, we actually never switched the heating on. Inside the greenhouse, the plants sailed through with a minimum temperature of 0°C. *Macropiper excelsum* (kawakawa) merrily produced inflorescences all winter in the greenhouse. Meanwhile, outside, *Cyathea australis* (rough tree-fern) decided it would produce a flush of new fronds in February, *Banksia ericifolia* has been in flower since December and our *Protea cynaroides* produced nine blooms over the winter.

The plants have however had to cope with a very wet and windy winter. Just down the road from us at Aberdaron, gusts of 109 mph were recorded and Llanberis itself saw gusts to 80mph. There was one point, whilst Ben was looking out of the kitchen window, that he exclaimed "*I can't believe that greenhouse is still there*!". The next moment he stood dumbfounded as our temporary greenhouse flew over the neighbour's wall. This exposed a large number of plants, including the Norfolk island pine, and all the seed that I had put in it to stratify for the winter.

On that subject, over the winter we have seen exceptional rates of germination from varied members of the *Proteaceae* including *Banksia ericifolia, B. lemanniana, B. blechnifolia, B. serrata, B. collina* (synonym *B. spinulosa* var. *collina*) and *B. canei*. We also saw good germination of a couple of species of *Hakea*, *Solanum linearifolium* (mountain kangaroo-apple), *Brachyglottis buchananii* and many other Australasians. I can only presume it is because the right levels of day night temperature fluctuation for germination have taken place.

Looking toward this year we have added some new species to the garden including *Atherosperma moschatum* (southern sassafras), *Lambertia formosa* (mountain devil), *Nothofagus moorii* (Antarctic beech) and *Eucryphia moorii* (plumwood). We have planted them early to allow them to get the maximum length of time to establish themselves and so that any residual cold left this year will force them to harden off a bit. We

also did the unthinkable and moved a *Banksia integrifolia*. No doubt by this time next year we will know if these 'experiments' have worked.

Ben and I wish you all a wonderful growing season and hope that the summer is as good as last. More information about our garden is at www.fossilplants.co.uk.

Do you have any spare *Richea*?

Maurits de Vries is searching for Richea species, such as R. scoparia, R. gunni and R. x curtsii. If you have any spares or know of a UK nursery that lists these species please contact him at maurits187@gmail.com.

Growing Australasian Plants in Tarragona

Phemie Rose

At the beginning of August 2013 we relocated to Tarragona (north east Spain) with over a hundred potted up plants, some thirty odd being Australasian. All were grown from seed (some from the APS) in west Cork. I thought that plants from the southern hemisphere, Mexico and California would cope best with hot, dry conditions. I had not then taken into account the effect of wild boar rooting in the garden; I now know that they are extremely partial to South African bulbs and *Anigozanthos flavidus* (kangaroo paw) which disappeared without trace leaving only the label!

I love restios and brought some South African and Australasians with me. *Aspodasmia similis* (oioi from New Zealand) has not died but has not grown. Similarly, *Tremulina tremula*, a Western Australian endemic, has survived but not thrived. *Baloskion tetraphyllum* (from Australia, grown from APS seed) was not looking good and being uprooted by the boar finished it off completely.

Cordyline obtecta 'Green Goddess', grown from an offshoot of the plant killed by frost in big freeze 2010, is growing well while *Cordyline stricta* (which is still living in our indoor garden room) has really loved it here and grown well. We have added a few to the collection bought from local nurseries and garden centres. *C. australis* 'Purpurea', 'Torbay Dazzler' and 'Karo Kiri' are all growing well. From New Zealand, *Metrosideros bartlettii* (Bartlett's rata), *M. robusta* (southern rata) and *M. excelsa* (pohutukawa) species are also growing really well and do not seem to mind the strong winds we have had over the winter.

Melaleuca lanceolata (Rottnest teatree) is doing well and *Sollya heterophylla* (bluebell creeper, now *Billardiera heterophylla*) has surprised me by growing well in a very exposed spot. *Scleranthus biflorus* (knawel or cushion-bush) is not growing well and was partly devoured by boar but hopefully it will recover. *Grevillea robusta* (76cm high), which I managed to kill several times in West Cork, is



left
Veronica derwentiana **in the forest at Kawarren, January 2014**

below left
Coast beard heath (*Leucopogon parviflorus*), taken in Hastings in June 2010

below right
Sea box (*Alyxia buxifolia*), Cape Otway lightstation, January 2014





A stunning *Acacia*, Phemie Rose's garden, Tarragona



A coral fern in the forest at Kawarren, January 2014



looking a bit battered by the wind but at least it is still alive.

Eucalyptus ficifolia (now *Corymbia ficifolia*) from APS seed sown in 2011 is now 152cm high. Of the three plants transported from West Cork, one was defoliated by our visitors and rooted out of the ground, another was damaged, but the third was ortunately.untouched. The two that were damaged have been replanted so we shall just have to wait and see what survives. *Eucalyptus leucoxylon* subsp. *megalocarpa* (APS seed 2010) was badly burnt by the winter winds but is showing signs of new growth.

Paraserianthes lophantha (Cape Leeuwin Wattle) is 168cm tall. It is in flower at the moment and beautiful it is (photo, back cover). It never flowered in West Cork. Of our other wattles, *Acacia floribunda* has flower buds and *A. cultriformis* (APS seed) is now 1m tall and growing well. *Acacia dealbata* (I think) was already in the garden and has been in flower for weeks (photo, opposite page). It is really stunning!

Bottlebrushes *Callistemon viminalis* 'Captain Cook' and *C. pallidus are both* thriving. *Corynocarpus laevigatus* (karaka or New Zealand laurel) has remained static. *Orthrosanthus multiflorus* (morning flag) was growing well until it got uprooted. It is now replanted and I think will survive.

A few more Australasian plants have been acquired locally. *Dodonaea viscosa* (sticky hop bush), which I killed at least twice in West Cork, was uprooted but has now been replanted with fingers crossed. *Grevillea* 'Canberra Gem' growing very well and *Pittosporum tobira* 'Nanum' is looking good with no boar damage.

In our big indoor garden room we are indulging our passion for ferns. Since coming here we have acquired *Dicksonia antarctica* (soft tree-fern), *Cyathea australis* (rough tree-fern) and C. *cooperi* (straw tree-fern), and we brought with us *Marattia salicina* (king fern, synonym *Ptisana salicina*). None of these are planned for outside as we have the space indoors to indulge ourselves.

We are trying out plants that we hope will not need to be watered and can cope with the long spells of drought. The soil in the garden varies a great deal with the patch in front of the house being very dry and stony. Other places have rich red soil. Planting except after rain is very hard work as the ground has to be watered before it is possible to dig a hole of any size because the earth is like concrete. We had not watered the plants since their initial watering in after planting until recently when plants that had been boar damaged needed a bit of tlc.

I find the ability of plants to cope with different climates amazing. All of the plants mentioned above grew well in the moist, mild climate of West Cork and now they are growing in hot, windy, dry Tarragona. *Metrosideros* grow

Thysanotus

Has anyone out there ever managed to successfully grow *Thysanotus* from seed? If so, could you let us know how you did it? Please contact the editor in the first instance.

really well here (I would be interested to hear of anyone else growing *M. bartlettii*) as do acacias, cordylines, melaleucas and callistemons so there is lots of scope for experimenting with APS seed. We are enjoying experimenting; after all that is what gardening is all about.



COULD I GROW IT IN MY GARDEN?

Judy Clark

I was born and brought up in Melbourne and in recent years, now that my elderly mother is unable to travel, I have returned annually during the UK winter. A highlight of my trips is always the visit to my brother's home about 160km south west of Melbourne. For nearly forty years he and his family have lived on a small property at Kawarren, a few kilometres north of the Great Otway National Park and a few kilometres south of the country town of Colac.

After so many years as an irregular visitor to the Otways small parts are now somewhat familiar, but the it is a large area. The National Park alone covers 103 km. It runs along the coast from Torquay through Apollo Bay to Princetown, and stretches north through the Otway Ranges and some wonderful temperate rainforest before reaching its boundary near Colac. However, it's less than twenty years ago since I became interested in the plants that grow in the Otways, and it is only in the past few years that, on seeing a plant that I takes my fancy, I have asked myself the question: could I get it to grow it in my garden?

I actually began thinking about this question in relation to plants growing in the garden around my brother's property. It is often said that Australian soils are old and very impoverished but this is not the case everywhere and their soil is basically clay, not unlike mine, which is a good start, but overall their climate is warmer and wetter than mine. It can get very hot in summer - I have been there when the temperature has hit 40^{o}C - but the mean maximum summer temperature is somewhat lower; from 1983 to 1998 it was 23.9^{o}C, in February, measured at the nearest weather station (Ellimynt). Over the same period and at the same weather station the mean minimum temperature was 4.9^{o}C (in July) and the lowest temperature recorded was -1.2^{o}C in June. There may be a microclimate effect due to the adjacent forest because the town of Colac experiences a slightly higher mean maximum temperature (26^{o}C), and a slightly lower mean minimum (3.9^{o}C). My sister-in-law tells me ground frosts

are not that rare and she believes that their frequency has recently increased again. However, even in winter it usually warms up during the day. Mean annual rainfall (measured at Ellimynt) is just over 1000mm, which compares with just over 750mm for Hastings over the past thirty years .

They grow fruit and vegetables and like many Australians my sister-in-law loves roses although at least they have the water for them. Over the years they have planted some native species, though mostly ones which are native to other parts of Australia. They include many which APS members will recognise: *Grevillea robusta* (which flowers prolifically), Cootamundra wattle (*Acacia baileyana*, presumably 'Purpurea' or similar given the colour of its foliage), *Acacia pravissima* (Ovens wattle) and various bottlebrushes are all doing well. I have tried to collect seeds from the Cootamundra wattles but by January the crimson rosellas have always got there before me, smart enough to take only plump and nutritious seeds and leave the shrivelled up ones!

One delectable plant that does well in a sunny spot in their garden is the native frangipani, *Hymenosporum flavum*. This tall shrub or small tree (it can reach 10m) is a native of coastal Queensland and New South Wales where it grows in rainforest and temperate forest. The **photo (front cover)**, shows its luscious pale creamy yellow flowers which fade to darker yellow and orange, and which resemble those of tropical frangipani (*Plumeria* species) in appearance, hence its common name. Otherwise *H. flavum* bears no relation, being a member of the pittosporum family. Its other attraction is a beautiful sweet fragrance. Jeff Layman told me he grows it (with protection) and he recalls seeing a plant flowering outside at Pine Lodge near St Austell, in 2001, though he has no idea if it is still there. Ross and Irons (1997) suggest it might be hardy to at least -1^{o}C while Elliot and Jones (vol. 5, 1990) state that it is hardy to moderately heavy frosts (the Australian version of, that is) and recommend it for temperate gardens; has anyone seen it growing in the warmer parts of Europe? The RHS Plant Finder (2014) lists five suppliers so I may get one yet, even if I have to protect it in winter.

I have collected seed from both of their mature white-flowered paperbarks, but only *Melaleuca linariifolia* (snow-in-summer) produced anything. This is another NSW and Qld native, where it grows in wet areas in open forests. A two-year old plant went into my garden last August and is now

Australian fuchsias

Do you grow any correas? Judy Clark is developing a collection of *Correa* species and cultivars and would be delighted to receive cuuting material. Please contact her first; details are insode the back cover of this newsletter.

growing away well but last winter was hardly a testing one. Elliot and Jones (vol. 6, 1993) suggest that it is hardy to most frosts but it seems unlikely that in its native habitat it would experience extensive cold spells. Ross and Irons (1997) suggest it might be hardy to at least -5°C. (If you want to try, *M. linariifolia* is on the APS seedlist.)

My brother's property abuts some state forest where soil and climate must be much the same as in his garden (though I must say I haven't checked the soil; too many venomous snakes to go carelessly poking around in the undergrowth). The area was clear-felled for timber over a century ago (if I remember correctly) and then left to regenerate naturally. Common tree and shrub species include manna gum (*Eucalyptus viminalis*), messmate (*E. obliqua*), blackwood (*Acacia melanoxylon*), prickly moses (*A. verticillata*), silver banksia (*Banksia marginata*) and Victorian Christmas-bush (*Prostanthera lasianthos*), which, unsurprisingly, generally flowers around Christmas time.

I already have a specimen of *Prostanthera lasianthos* growing in my garden but it looks a puny thing after one has seen it in the wild, growing metres tall in the understory. But then my current plant has only been in the ground since spring 2011 so maybe I ought to give it a bit more time. It was purchased from a nursery in Devon after a plant I had grown from seed collected during an earlier trip died, probably killed off by the hard winter of 2009-10. I suspect that provenance is important with this variable species (several subspecies used to be recognised) which is found in all the eastern states, generally in moist sheltered sites. It even grows in the Victorian Alps in places where there is continuous snow cover for at least one month each year. I have another *P. lasianthos* plant, raised from a cutting from material originally from the Grampians area (north west Victoria), waiting for a spot in the garden which may prove a better garden plant than the Devon one.

I grow *P. lasianthos* in a semi-shaded spot, and it is my experience that some other mint bushes including *P. rotundifolia* and *P. ovalifolia* also do better in semi-shade that in full sun, despite labels often recommending this. Mint bushes do need to be pruned after flowering otherwise floriferousness declines and they tend to become very leggy.

The forest contains some wonderful ferns, which I mostly can't put a name to but that doesn't prevent me from admiring them. The photo (page 32) shows a delicate scrambling fern which I think is a coral fern, perhaps *Gleichenia dicarpa* or *G. microphylla*, both of which are widespread in eastern Australia, including Tasmania. (The latter is also found in New Zealand.) I have long wondered why I'd never heard of coral ferns in cultivation When I consulted Elliot and Jones (vol. 4, 1986) I realised why. Coral ferns

Garden visits

APS members are welcome to visit me (your editor) if passing by – just contact me first! If you would welcome visitors to your garden and would like to make this known please let me know and I'll put the details in Pentachondra.

are, "*very attractive ferns which, unfortunately, are difficult to cultivate. They resent disturbance of the roots, the use of lime and fertilisers and never recover from drying out. Propagation is from spores which can be difficult to raise*" (page 361). Now there's a challenge for someone!

Veronica derwentiana (formerly *Derwentia derwentiana* or *Parahebe derwentiana*) is another plant which grows in the forest in moist semi-shade. I have always had a soft spot for veronicas and this stately plant with its tall spikes of white flowers is a real beauty (photo page 31). This is another species that is widespread in Australia, found in the cooler areas of all the eastern states, including the Kosciuszko alpine area. According to the Australian National Botanic Gardens (ANBG) website it withstands temperatures as low as -7°C to -12 °C. And it is herbaceous, with the stems dying down each year. Surely this plant could flourish in Britain? Apparently seeds are not readily obtained (ANBG website) which does pose a bit of an obstacle to its cultivation in Britain. Yet it is mentioned in Ross and Irons (1997) who list it as hardy to at least -8°C. This suggests it may have once have been grown in Britain and/or Europe. Does anyone know where, or by whom? Or, even better, is there a plant lurking in a garden somewhere?

I have in the past had a go with some of the small and delicate plants that I have seen flowering by the edge of the track, growing in drier areas and partial shade. The APS offers seed of a number of these, but when it comes to milkmaids (*Burchardia umbellata*), blue pincushion (*Brunonia australis*) and early nancy (*Wurmbea dioica*), clearly my then propagation skills weren't up to the job. I have found that grass triggerplant (*Stylidium gramineum*) germinates like grass but I've never got it past the seedling stage. Others I have just consigned to too difficult box, not even bothering to try and source seed: for example *Pimelea* (possibly bootlace bush, *Pimelea axiflora*), twining fringe lily (*Thysanotis patersonii*) and pink bells (*Tetratheca ciliata*). (More challenges for someone?) However, one species that I have grown successfully is the lemony coloured pale everlasting *Helichrysum scorpioides*, though only in a pot as it's so far refused to thrive where I've tried it in the garden.

Moving to the coast, my brother works as an historian and guide at the Cape Otway Lightstation. Located close to the Great Ocean Road, the lighthouse is a popular (and well worth visiting) tourist

attraction (so popular with international tourists that my brother is now used to meeting visitors who are acquainted with me or my son; do say hello should you make the journey.) It is surrounded by what I would call scrub and heathy grassland and the soil appears quite sandy. The climate on average is neither as hot nor as cold as where my brother lives, with a mean maximum temperature of 21.6°C in February and a mean minimum of 7.5°C in July (1864-2014, measured at the Cape Otway weather station).The major difference is exposure to salt-laden winds, with the area regularly subjected to gusts of over 100 km/h, but this is not so different from the coast of south east England where I live. My back garden is sheltered is from the prevailing south westerlies, but such strong gusts do occur when the wind comes from elsewhere. (The past winter in particular has shown what damage gales from the south and south-east can do, despite shelter from 2m privet hedges down the sides and a back fence of similar height. A number of plants that are not sheltered enough suffered from root rock though in the end all seem to have recovered except for two: rock correa (*Correa glabra* var. *glabra*) and a plant obtained as *Senna* "*artemisioides*".)

One species that grows at Cape Otway, and which I have grown successfully, is coast beard heath, *Leucopogon parviflorus*, a member of the Ericaceae. It has a wide distribution, occurring not only in all Australian states (except the Northern Territory) but also on New Zealand's Chatham Islands (where it is uncommon). It usually grows on stabilised dunes and coastal heathland..

I bought my plant from Trevenna Cross Nursery and I have no idea of its provenance. I planted it in a sheltered but sunny part of the garden in spring 2004. It flowered in 2006, bearded white tubular flowers tinged with maroon, followed by white berries. (I say berry, technically the fruits are called drupes.) By 2008 it was growing and flowering really well. Then followed (compared with what had gone before) two hard winters in succession, though my records tell me that *L. parviflorus* survived both with little damage (photo page 31). Then came the winter of 2010-11. I made a list of casualties at the end of March 2011, noting "*Leucopogon, looks bad, dying?*" And it was. However, whether its death was due to prolonged cold, or only to prolonged cold, is open to question. I have since discovered that *L. parviflorus* needs really good drainage (Elliot and Jones, vol. 6, 1993). I don't remember how I prepared my clayey ground for planting, but I was less experienced then, and maybe it wasn't good enough. This is a plant I would certainly try again if I could get hold of it. It used to be offered by County Park Nursery but their 2013 plant list shows it as not available.

A plant growing at Cape Otway that I would like to have in my

garden, but don't, is sea box, *Alyxia buxifolia*, an evergreen shrub in the Apocynaceae family. I am very taken with its glossy green foliage and distinctive waxy white flowers with petals arranged like a child's windmill (photo page 31). It is found in exposed coastal areas all round southern Australia, including Tasmania, from the south of NSW to north of Geraldton on the west coast; in Western Australia it is also found inland. It is said to be happy on a variety of soils, even tolerating those derived from limestone. In Australia it seems to be sold primarily as a tough and reliable shrub resistant to salt spray, albeit relatively slow growing. It can be propagated from seed (though this apparently takes a bit of patience), and is said to tolerate frost (Elliot and Jones vol. 2, 1982); if it could cope with enough cold this could be a perfect plant for me. But it doesn't seem to have ever made it out of Australia. Is there something about it that I haven't discovered?

On reflection it seems that the question I posed earlier has several answers. Yes, I can grow some of the plants I've seen on my travels in my own garden, but others are just too tender unless I'm prepared to protect them in winter. Others I've found difficult to raise from seed, or haven't tried because they're said to be difficult, or else seed isn't available, so I haven't been able to test their hardiness. But there remain a couple that look good prospects as gardenworthy plants, if only I could get hold of them!

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BITS AND PIECES

Kew Gardens funding cuts

You may have seen the recent reports in the newspapers and on television about funding cuts at Kew. According to these reports cuts imposed by the government (Department for Environment,

Food and Rural Affairs) will see 125 jobs disappear and probably threaten Kew's reputation as a world famous centre for botanical research. Many scientists, educationalists and horticulturalists have made public their concern. If you too are concerned there is an online petition at Change.org (www.change.org/en-GB/petitions) which at the time of writing had been signed by more than 87,000 people.

More websites

Jeff Layman has found two more websites which may be of interest to members. One should be useful if you really have no idea what the plant you are looking at is, as it provides a means to whittle down to a manageable number the plant families to which it might belong: www.colby.edu/info.tech/BI211/PlantFamilyID.html.

The second, which has a somewhat misleading website name, provides lots of good photos of Australian plants which look to be reliably named (the author is an amateur botanist). You can find the A-Z Thumbnail Index of Australian Plants at www.ukwildflowers.com/Web_pages_intros_indexes/aus_index.htm (the gaps in the address are spaces).

Acacia seed mixes

The September 2013 Newsletter (number 122) of the ANPSA Acacia Study Group included some correspondence about successful seed raising mixes for acacias. One suggestion, from Phil Hemple, is a 3 to 1 mix of perlite and compressed coconut or coir fibre (expanded in water). This makes it "*easier to get the seedling out without damaging the roots when they are potted on*", page 5).

Two other suggestions for seed raising mixes came from a book called **Growing Acacias** by Marion Simmons**.** Excellent results are said to be achieved using either 3 parts washed or sterilised coarse river sand to 1 part peat moss or aged crushed pine bark, or 3 parts perlite to 1 part peat moss.

Dianella dye

It is commonly reported that the fruits of flax lilies *(Dianella* species) were used by indigenous Australians to dye mat-rush leaves (*Lomandra* species) used for making baskets. Has anyone ever tried using bright blue *Dianella* berries as a dye?

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Robbie Blackhall-Miles: page 19
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Chatham Island forget-me-not, *Myosotidium hortensia*, in Hampshire



***Paraserianthes lophantha*, Cape Leeuwin Wattle, Phemie Rose's garden in Tarragona**